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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,419	12/08/2003	Scott K. Parrish		9778

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EXAMINER

PAK, JOHN D

ART UNIT PAPER NUMBER

1616

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/728,419

Applicant(s)

PARRISH, SCOTT K.

Examiner

JOHN PAK

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Claims 1-9 are pending in this application.

Applicant is advised of an inconsistency in claim 2: "a phosphonic compounds."

Correction is suggested, keeping in mind dependent claims should correspond to any such correction.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- 1) Claim 1 contains three periods – a claim must contain only one period.
- 2) Claim 1 contains misspellings: "muratic" (should be muriatic) and "phosphorous" (should be phosphorus).
- 3) The language, "include, but are not limited to" and "selected from but not limited by the group" are all unacceptable language for setting forth a list of alternatives. If the broadest scope is intended but specific species are included, such specific species should be recited in a dependent claim.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by WPIDS abstract 1986-007470.

WPIDS abstract 1986-007470 explicitly discloses the plant growth regulator 2-chloroethanephosphonic acid (i.e. ethephon, the same compound as in applicant's claim 1) in combination with several ingredients, including 1.6% acetic acid. The combination of ingredients is disclosed as "synergistic." The composition is applied to plants.

Applicant's composition claim 1 is clearly anticipated. As for the method claims 2-5 and 8, although the cited reference does not explicitly state "increasing the efficiency and efficacy" of ethephon, it is noted that the cited reference teaches a synergistic mixture of ethephon + acetic acid. Since ethephon is a plant growth regulator, any such plant growth regulating property is therefore synergized. Increased efficiency of defoliation, plant growth regulation, growth inhibition and plant height stunting properties of ethephon would necessarily be obtained, not only because the cited reference discloses the application of the same exact composition to the same exact plants, but also because the reference teaches synergism for ethephon. All claims noted above are therefore anticipated.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Derwent abstract 1997-133542.

Derwent abstract 1997-133542 explicitly discloses the combination of 2-chloro-ethyl phosphonate (ethephon salt) with 1-5 parts citric acid. The composition of applicant's claim 1 is thereby anticipated.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over WPIDS abstract 1986-007470 in view of The Farm Chemicals Handbook '98.

WPIDS abstract 1986-007470 explicitly discloses the plant growth regulator 2-chloroethanephosphonic acid (i.e. ethephon, the same compound as in applicant's claim 1) in combination with several ingredients, including 1.6% acetic acid. The combination of ingredients is disclosed as "synergistic." The composition is applied to plants.

The Farm Chemicals Handbook '98 discloses ethephon to be a widely used plant growth regulator (ethylene generator). Uses on crops such as cotton, apples and many others are disclosed. Stability under pH 3 is taught. See page 164.

Claims 1-5 and 8 have already been found to be anticipated by WPIDS abstract 1996-007470, so with respect to these claims, there is no patentable difference from the teachings of said WPIDS abstract.

Alternatively, even though the WPIDS abstract does not explicitly state in verbatim language the features of increasing the defoliation efficiency, growth inhibition efficiency, boll opening efficiency in cotton, defoliation in cotton, and plant height stunting efficiency, such features would have been obvious to the ordinary skilled artisan. Not only does the cited WPIDS abstract synergism upon combining ethephon with acetic acid, the Farm Chemicals Handbook '98 teaches that $\text{pH} \leq 3$ is required for stability of ethephon. Having an acid such as acetic acid would be expected to lower the pH of the composition, and having a stable ethephon would mean less decomposition and more ethephon to deliver its efficacy. Therefore, the double advantage of synergism, as taught by the WPIDS abstract, and less decomposition, as taught by the Farm Chemicals Handbook, would have motivated the ordinary skilled artisan to combine ethephon + acetic acid to plants, as claimed, and expect increased efficiencies, as claimed.

Claim 9 recites 2% volume of acid. Although this feature is not expressly disclosed by the cited references, such an amount would have been well within the skill of the ordinary skilled artisan. First, 2% volume does not actually specify how much of an acid is to be added because the actual amount of the acid depends on its concentration strength. 2% of a very dilute acid is different from 2% of a 100% strength acid. Thus, applicant's claim feature does not really limit the quantity of acid that is to be applied with ethephon. Further, the WPIDS abstract already teaches 1.6% acetic acid, and $\text{pH} \leq 3$. The ordinary skilled artisan would have been motivated to add or apply sufficient quantities of acetic acid or other acid ingredients to ensure that the pH is low enough to stabilize ethephon. Hence, the 2% volume of acid would have been obvious since such an amount is open to varied amounts of acid, depending on its concentration strength, and suitable amounts to adjust the pH to less than or equal to 3 would have been well within the skill of the ordinary skilled artisan.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited reference.

Art Unit: 1616


Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Sreeni Padmanabhan, can be reached on **(571)272-0629**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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